



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7**

11201 Renner Boulevard
Lenexa, Kansas 66219

FEB 21 2014

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Brian Mills
DICO
P.O. Box 1616
Des Moines, Iowa 50306

Re: Administrative Order, Docket No. 86-F0011
Disapproval of DICO's Performance Evaluation Report No. 27, Groundwater Extraction and
Treatment System, Des Moines TCE Site, Des Moines, IA

Dear Mr. Mills:

NOTICE OF DISAPPROVAL

The EPA received DICO's Performance Evaluation Report No. 27 (Report) on July 31, 2013. The EPA has reviewed the Report and disapproves of the document in accordance with paragraph 36 of the above-referenced Administrative Order. Attached to this letter are the EPA's comments to the Report and the reasons the EPA cannot approve this document. Please note that while the EPA's attached comments reference specific sections of the Report, the comments are applicable to the entire Report. In accordance with paragraph 36 of the above-referenced Administrative Order, DICO must submit a revised report within thirty days of receipt of this notice that addresses each of the comments to the satisfaction of the EPA.

If you have any questions concerning this matter or wish to discuss the actions necessary to revise the Performance Evaluation Report to obtain the EPA's approval, please contact me at (913) 551-7454.

Sincerely,

Sandeep Mehta
Remedial Project Manager
Iowa/Nebraska Remedial Branch
Superfund Division

Enclosure

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Superfund

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cc: Brian Mills, DICO (via e-mail and USPS)
Hylton Jackson, IDNR (via e-mail only)
Gazi George, (via e-mail only)
Quentin McDonald, EME (via e-mail only)
Mike McCurnin, DMWW (via e-mail only)
Gary Benjamin, DMWW (via e-mail only)
Ted Corrigan, DMWW (via e-mail only)
Jeff Mitchell, DMWW (via e-mail only)

EPA Review Comments
Performance Evaluation Report 27
DICO, Des Moines, Iowa
February 2014

Comment No.	Page/ Section/ Paragraph	Comment
1	Page 4, Section 2.4	The potentiometric maps do not depict the capture zone. The use of water levels from extraction wells in the development of these maps is not appropriate. To address this concern, DICO must install piezometers within 10 ft to 15 ft of the extraction wells for the purpose of providing representative water levels under a pumping scenario. The data from the new piezometers will be used in subsequent Performance Evaluation Reports (No. 28 and thereafter). The text must be revised to indicate the depicted cone of depression does not equal the capture zone unless the hydraulic gradient is zero. Revise the text throughout Report 27, as necessary, to address these concerns.
2	Page 5, Section 2.4, Paragraph 3, Last Sentence	The text notes that there has been no evidence of TCE and/or DCE migration beneath the Raccoon River. Apparently, under certain hydrologic conditions, limited low-level concentrations have been detected west of the river. Section 2.5 notes that TCE was detected in April 2012 and October 2012 in MH-1N. Revise Report 27 throughout to account for this low-level variability in those COCs west of the river.
3	Page 6, Section 2.6, Paragraph 2, Sentence 3	The text indicates that TCE and total 1,2-DCE are relatively stable. The text must define and quantify the term “relatively” by noting the variability in the April/October groundwater data for those COCs (e.g. – at well NW-27 1,2-DCE varied from 98 ug/L to 120 ug/L; TCE varied at well NW-22 from 14 ug/L to 26 ug/l for the two sampling periods). Seasonal increases of vinyl chloride during the October sampling period must also be referenced in the text.
4	Page 8, Section 2.8.1, Sentence 3	The text indicates the 2012 analytical results found no unexpected or new contaminant detections. The Fifth Five Year Review Report cited trends of 1,2-DCE in OU1 wells: 1) concentrations in ERW-5 have increased since 2008; and 2) concentrations in NW-2 have increased from 1987 – 2011. The Fifth Five Year Review Report also noted probable increasing trends for vinyl chloride from 1987 – 2011 in wells ERW6, ERW7, NW-2 (however trend is influenced by non-detects), and NW-22. Rather than indicate that no unexpected or new contaminant detections were found, the text throughout Report 27 must note these increased trends as identified in the Fifth Five Year Review Report.
5	Page 8, Section 2.8.1, Sentence 4	The DICO Performance Evaluation Report 27 indicates the Groundwater Extraction and Treatment System is not needed because of the constant head barrier provided by the Raccoon river spillway and natural groundwater flow patterns. The Fifth Five Year Review Report indicates that in the event the DMWW elects to withdraw groundwater from the northern gallery, the current Groundwater Extraction and Treatment System will be insufficient to provide adequate migration control. The Fifth Five Year Review Report also indicates the evidence suggests contaminants migrating from OU3 to OU1 will not be adequately captured by the existing extraction well system. The EPA’s understands that the City still contemplates use of the northern gallery at some

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		time in the future. Comment 7 below provides further reasoning as to why the Groundwater Extraction and Treatment System should remain operational. Report 27 must be revised throughout to eliminate any suggestion that the Groundwater Extraction and Treatment System is no longer needed.
6	Page 8, Section 2.8.1, Sentence 5	The text indicates the Groundwater Extraction and Treatment System removes large quantities of river water needed to maintain the local water supply. This statement is not supported by information contained in DICO's Performance Evaluation Report 27. Provide sufficient documentation to justify this conclusion or remove this statement throughout DICO's Performance Evaluation Report 27.
7	Page 8, Section 2.8.1, Sentence 10	The text indicates that the steady decline in product recovery rates indicate the Groundwater Extraction and Treatment System has essentially achieved its goal and no additional benefit will come from continued operation of the system. This conclusion is not supported by the data. Figure 2-3B depicts TCE concentrations that while erratic, do not indicate declining influent concentrations. Influent TCE concentrations since 2010 are consistently near 500 ug/L. The 2012 influent TCE concentrations averaged about 464 ug/L and were consistently between 400 to 500 ug/l; as consistent as the Raccoon River elevations depicted on Figure 2-2. There appears to be a persistent source of impacts to groundwater at OU1. Asymptotic mass concentrations demonstrate the limitation of the Groundwater Extraction and Treatment System in reducing COCs to meet restoration goals at the site. In addition, the Fifth Five Year Review Report noted deteriorating conditions of various areas of the asphalt cap; with continued deterioration, more infiltration will occur and the potential for soil source material to impact groundwater will increase. Thus, DICO's groundwater monitoring results demonstrate that the hydraulic containment provided by the continued operation of the Groundwater Extraction and Treatment System is necessary to restrict plume migration to offsite areas, including areas west of the Raccoon river. Please also refer to the EPA's response dated October 23, 2010 to EME's July 15, 2010 correspondence. Revise Report 27 throughout to indicate the Groundwater Extraction and Treatment system must remain operational.

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City, State,	2345 East Market Street
	Des Moines IA 50317

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